

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) A method comprising a step of irradiating carbon nanotubes with microwaves to yield a plurality of crosslinked carbon nanotubes.
2. (Original) The method of claim 1, wherein the step of irradiating is carried out in an inert environment selected from the group consisting of ultra-high vacuum, high vacuum, inert gases, and combinations thereof.
3. (Original) The method of claim 1, wherein the microwave radiation comprises a frequency that ranges from about 0.01 GHz to about 100 GHz.
4. (Currently amended) The method of ~~claims~~ claim 3, wherein the frequency ranges from about 1 GHz to about 18 GHz.
5. (Original) The method of claim 1, wherein the microwave radiation is generated by a magnetron with a power that ranges from about 1 W to about 10,000 W.
6. (Original) The method of claim 5, wherein the power ranges from about 10 W to about 1,000 W.
7. (Currently amended) The method of claim 1, wherein the plurality of crosslinked carbon nanotubes ~~material~~-comprises at least one junction formed via ~~the a~~ rearrangement of carbon atoms.

8. (New) A method comprising a step of irradiating carbon nanotubes with microwaves to yield a plurality of crosslinked carbon nanotubes, wherein crosslinking is generated between the sidewalls of adjacent carbon nanotubes.
9. (New) The method of claim 8, wherein the carbon nanotubes are single-wall carbon nanotubes.
10. (New) The method of claim 8, wherein the carbon nanotubes are chemically functionalized prior to the step of irradiating.
11. (New) The method of claim 8, wherein the crosslinking comprises covalent bonds.
12. (New) The method of claim 11, wherein the covalent bonds are carbon-carbon bonds.
13. (New) The method of claim 8, wherein the step of irradiating is carried out in an inert environment selected from the group consisting of ultra-high vacuum, high vacuum, inert gases, and combinations thereof.
14. (New) The method of claim 8, wherein the microwave radiation comprises a frequency that ranges from about 0.01 GHz to about 100 GHz.
15. (New) The method of claim 14, wherein the frequency ranges from about 1 GHz to about 18 GHz.
16. (New) The method of claim 8, wherein the microwave radiation is generated by a magnetron with a power that ranges from about 1 W to about 10,000 W.

17. (New) The method of claim 16, wherein the power ranges from about 10 W to about 1,000 W.

18. (New) The method of claim 8, wherein the plurality of crosslinked carbon nanotubes comprises at least one junction formed via a rearrangement of carbon atoms.